Dental, Oral and Maxillofacial Research

Research Article ISSN: 2633-4291

DNA/RNA of gum cancer cells—anti–cancer nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments

Alireza Heidari[1,2]* and Ricardo Gobato[3]

[1]Faculty of Chemistry, California South University, 14731 Comet St. Irvine, CA 92604, USA

[2]American International Standards Institute, Irvine, CA 3800, USA

[3]Green Land Landscaping and Gardening, Seedling Growth Laboratory, 86130–000, Parana, Brazil

Abstract

In the current research, DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments are investigated. However, it has been demonstrated by us and others that the choice of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments can greatly influence tissue classification results. In addition to developing best–practice techniques for spectral preprocessing, care must be taken when developing classification DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments for diagnostic evaluation. Validation studies need to be performed to confirm that DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments developed on ex vivo specimens are applicable to in vivo tissues. Machine learning DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments hold the promise of automating the identification and diagnosis of gum cancer. Deep learning training, using large numbers of spectra, may also identify molecular patterns among gum cancer types, aid in margin detection, and become predictors of the aggressiveness of the gum cancer.

Introduction

DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments can assist in uncovering the molecular basis of disease and provide objective, quantifiable molecular information for diagnosis and treatment evaluation. Numerous experimental studies have shown the capability of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments for tissue characterization. The translation for clinical use involves the development of comprehensive spectral databases and tissue classification methodologies that can be compared with current gold standards. Best–practice techniques for data processing, acquisition, and classification need to be developed and adopted. Various interferents, such as fluorescence, a process that usually "competes" with DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments can hamper the interpretation of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments of biological samples. Preprocessing the raw data helps eliminate unwanted signals, enhances DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments features, and allows more reproducible data for qualitative and quantitative analysis [1-10].

Results and discussion

Novel approaches toward understanding the evolution of disease can lead to the discovery of biomarkers that will enable better management of disease progression and improve prognostic evaluation. DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular

Correspondence to: Alireza Heidari, Faculty of Chemistry, California South University, 14731 Comet St. Irvine, CA 92604; American International Standards Institute, Irvine, CA 3800, USA, E-mail: Scholar.Researcher.Scientist@gmail.com; Alireza.Heidari@calsu.us; Central@aisi-usa.org

Key words: *DNA/RNA, gum cancer cells, anti–cancer nano drugs, ligands, two–dimensional NMR, molecular line shape analysis, quantum correlation*

Received: September 02, 2020; **Accepted:** September 21, 2020, **Published:** September 25, 2020

line shape analysis of single, multiple, zero and double quantum correlation experiments is a promising investigative and diagnostic tool that can assist in uncovering the molecular basis of disease and provide objective, quantifiable molecular information for diagnosis and treatment evaluation. This technique probes molecular vibrations/rotations associated with chemical bonds in a sample to obtain information on molecular structure, composition, and intermolecular interactions. DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments occurs when light interacts with a molecular vibration/rotation and a change in polarizability takes place during molecular motion. This results in light being scattered at an optical frequency shifted (up or down) from the incident light. By monitoring the intensity profile of the in elastically scattered light as a function of frequency, the unique spectroscopic fingerprint of a tissue sample is obtained. Since each sample has a unique composition, the spectroscopic profile arising from DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments–active functional groups of nucleic acids, proteins, lipids, and carbohydrates allows for the evaluation, characterization, and discrimination of tissue type. This review provides an overview of the theory of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments, instrumentation used for measurement, and variation of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments for clinical applications in gum cancer, including detection of brain, ovarian, breast, prostate, and pancreatic gum cancers and circulating tumor cells (Figure 1).

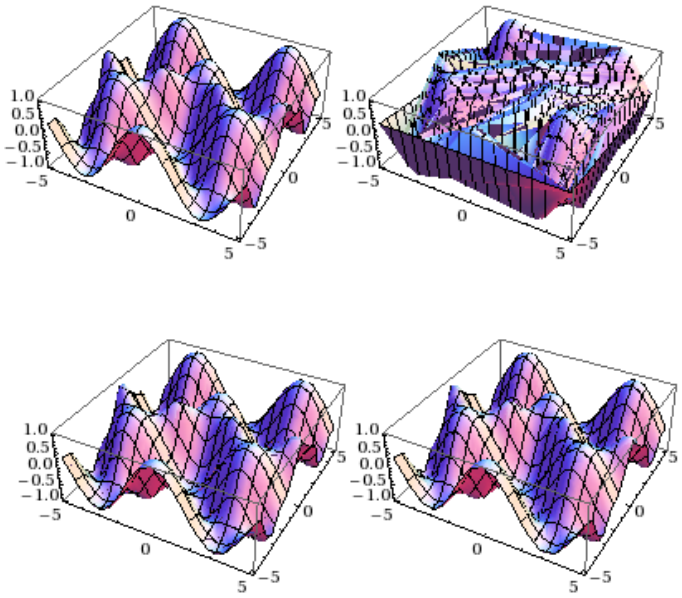

Figure 1. DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments

Conclusion

Non–invasive or minimally invasive in vivo tools that can provide rapid tissue assessment and/or monitor treatment therapies have potential application in many fields of medicine. Interest in DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments is rising due to the potential of DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments for non–invasive tissue diagnostics. DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments involve the study of the interaction matter with light. Molecules are composed of two or more bonded atoms that are in continuous motion (be it electronic, vibrational, rotational, or translational). Due to the different kinds of motion and intermolecular interactions, a molecule possesses different forms of energy that can be probed with electromagnetic radiation to obtain information on molecular structure and composition. A molecule can react to incoming light via the processes of absorption and scattering. The process of absorption occurs when a material takes up radiant energy internally. Since energy is quantized, there are distinct energy levels in a molecule that correspond to different amounts of rotational, vibrational, and electronic energy. If the energy of a photon matches a difference between two energy levels in a molecule, absorption can occur causing a transition from the lower to higher energy state. Rotational transitions occur at low energies (microwave region of the electromagnetic spectrum), while vibrational transitions occur in the DNA/RNA of gum cancer cells—anti–cancer Nano drugs ligands structure determination with the two–dimensional NMR molecular line shape analysis of single, multiple, zero and double quantum correlation experiments.

Acknowledgments

This study was supported by the Cancer Research Institute (CRI) Project of Scientific Instrument and Equipment Development, the National Natural Science Foundation of the United Sates, the International Joint BioSpectroscopy Core Research Laboratory Program supported by the California South University (CSU), and the Key project supported by the American International Standards Institute (AISI), Irvine, California, USA.

References

1. Heidari A, Brown C (2015) Study of composition and morphology of cadmium oxide (CdO) nanoparticles for eliminating cancer cells. *J Nanomed Res* 2(5): 20.

2. Heidari A, Brown C (2015) Study of surface morphological, phytochemical and structural characteristics of rhodium (III) oxide (Rh_2O_3) nanoparticles. *International Journal of Pharmacology, Phytochemistry and Ethnomedicine* 1(1): 15-19.

3. Heidari A (2016) An experimental biospectroscopic study on seminal plasma in determination of semen quality for evaluation of male infertility. *Int J Adv Technol* 7: e007.

4. Heidari A (2016) Extraction and preconcentration of N–Tolyl–Sulfonyl–Phosphoramid–Saeure–Dichlorid as an anti–cancer drug from plants: a pharmacognosy study. *J Pharmacogn Nat Prod* 2: e103.

5. Heidari A (2016) A thermodynamic study on hydration and dehydration of DNA and RNA−Amphiphile Complexes. *J Bioeng Biomed Sci* S: 006.

6. Heidari A (2016) Computational studies on molecular structures and carbonyl and ketene groups' effects of singlet and triplet energies of Azidoketene O=C=CH–NNN and Isocyanatoketene O=C=CH–N=C=O. *J Appl Computat Math* 5: e142.

7. Heidari A (2016) Study of irradiations to enhance the induces the dissociation of hydrogen bonds between peptide chains and transition from helix structure to random coil structure using ATR–FTIR, Raman and ^{1}HNMR Spectroscopies. *J Biomol Res Ther* 5: e146.

8. Heidari A (2016) Future prospects of point fluorescence spectroscopy, fluorescence imaging and fluorescence endoscopy in photodynamic therapy (PDT) for cancer cells. *J Bioanal Biomed* 8: e135.

9. Heidari A (2016) A bio–spectroscopic study of DNA density and color role as determining factor for absorbed irradiation in cancer cells. *Adv Cancer Prev* 1: e102.

10. Heidari A (2016) Manufacturing process of solar cells using cadmium oxide (CdO) and rhodium (III) Oxide (Rh_2O_3) nanoparticles. *J Biotechnol Biomater* 6: e125.